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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,879	04/21/2006	Hideaki Tanaka	358275.30005	6148

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EXAMINER	
AHMED, SHEEBA	
ART UNIT	PAPER NUMBER
1794	
MAIL DATE	DELIVERY MODE
04/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,879	TANAKA ET AL.	
	Examiner	Art Unit	
	SHEEBA AHMED	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *16-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/21/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Restriction Requirement

1. Applicant's election without traverse of Group I, claims 1-15 in the reply filed on March 18, 2008 is acknowledged. Claims 1-20 are pending of which claims 1-15 are under consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Obha et al. (US 6,605,344 B1) in view of Matsuo et al. (US 6,699,830 B1).

Ohba et al. disclose a gas-barrier film which is produced through applying a layer containing a metallic compound to a surface of a processed-polymer layer produced from a mixture of a polyalcohol and at least one poly(meth)acrylic polymer selected from the group consisting of poly(meth)acrylic acids and partially neutralized poly(meth)acrylic acids (See Abstract). The laminated gas-barrier film containing the aforementioned gas-barrier film can be laminated on with a plastic film. The gas-barrier film exhibits excellent gas-barrier properties. The metallic compound is at least one species selected from the group consisting of magnesium oxide, calcium oxide, zinc oxide, magnesium hydroxide, calcium hydroxide, and zinc hydroxide. There is also provided a gas-barrier film wherein the metallic-compound-containing layer is produced

from a mixture of the metallic compound and a resin. The metallic-compound-containing layer is applied to the surface of a polymer layer and the metal invades the polymer layer from the metallic-compound-containing layer. Invasion of a metal can be confirmed by means of energy-dispersive X-ray spectroscopy (EDX). The existence ratio in the polymer layer (the number of counting of metallic atoms/the number of counting of oxygen atoms) is 0.1-20 at a position 0.1 microns deep in a polymer layer from the interface between the polymer layer and a layer containing a metallic compound solely or a layer of a mixture of metallic compound and resin. With regards to the density, he surface ratio of the infrared absorption spectrum, the peak ratio of infrared absorption spectrum, the water vapor permeability and oxygen permeability. As used herein, the term "a polymer layer which is fixed onto a substrate" refers to "a polymer layer, to which a metallic-compound-containing layer is not applied, which is fixed onto a substrate" or "a polymer layer which may be peeled off a substrate." The material of a substrate is not particularly limited, and a metallic plate, a glass plate, or a plastic film may be employed as a substrate. Of these, a plastic film is preferably employed. More preferably, a substrate is chosen from a variety of plastic films in accordance with heat treatment temperature or the intended use of a gas-barrier film (for example, a gas-barrier film is used in sterilization treatment). When the polymer layer is subjected to heat treatment, the resultant layer has water resistance. In addition, there can be produced a polymer film exhibiting excellent gas-barrier properties (See Column 1, lines 5-15; Column 2, lines 46-64; Column 3, lines 23-36; Column 9, lines 43-53; and all Examples).

Obha et al. do not teach that the metallic-compound-containing layer also contains a surfactant.

However, Matsuo et al. disclose a crosslinked, carboxylic acid-based copolymer having good water absorbability and biodegradability, and a method for producing it. The crosslinked product of an unsaturated carboxylic acid-based copolymer is derived from a monomer component that comprises an unsaturated monocarboxylic acid monomer. The unsaturated monocarboxylic acid monomer includes acrylic acid, methacrylic acid or their salts, that is, partially or completely neutralized products of the acids with any of monovalent metals, divalent metals, ammonia or organic amines, or their mixtures. The monovalent metals include Na and K; and the divalent metals include Mg, Ca, Ba and Zn. The unsaturated carboxylic acid polymer may be combined with a surfactant to give a biodegradable detergent composition. The surfactant may be any of anionic surfactants, cationic surfactants, nonionic surfactants, ampholytic surfactants, etc. A detergent composition comprising the unsaturated carboxylic acid polymer and a surfactant has the advantages of good detergency and good biodegradability. A dispersant comprising the unsaturated carboxylic acid polymer has the advantages of good dispersibility and good biodegradability.

Accordingly, it would have been obvious to one having ordinary skill in the art to add a surfactant to the metallic-compound-containing layer given that Matsuo et al. specifically teach that a composition comprising a surfactant has the advantages of good detergency and good biodegradability. With regards to claim 3, which recites a

specific sequence for the layers, the Examiner takes the position that it would be obvious to optimize the number of layers for any given intended use as long as the layer containing the metallic compound is next to the surface of a processed-polymer layer produced from at least one poly(meth)acrylic polymer. Furthermore, it would be obvious to one having ordinary skill in the art to optimize the thickness of each layer given that thicker layers would provide better gas barrier properties.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEEBA AHMED whose telephone number is (571)272-1504. The examiner can normally be reached on Monday-Friday from 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sheeba Ahmed/
Primary Examiner, Art Unit 1794